

AIR WAR COLLEGE

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IS SORDAC'S RAPID ACQUISITION PROCESS BEST PREPARED TO FIELD
SOLUTIONS FOR FUTURE TECHNOLOGICAL CHALLENGES?

by

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Biography

Col Eric Mikkelson is assigned to the Air War College, Air University, Maxwell AFB, AL. Prior to Air War College, Colonel Mikkelson served as the Individual Mobilization Augmentee (IMA) to the 57th Wing Commander, Nellis AFB, Nevada where he augmented 57th Wing Senior leadership and advised the 57th Wing Commander on a wide range of Air Force Reserve issues; manning, budget, immediate Reserve augmentation requirements, and manpower liaison with the 926th Wing.

Colonel Mikkelson received his commission from the United States Air Force Academy in 1990 and completed over ten years on active duty, primarily as a C-5 Special Operations/Low Level (SOLL II) instructor pilot, prior to joining the Air Force Reserve in 2001. His diverse experience spans sensitive programs, special operations, cyber, operations centers, mobility airlift, developmental engineering, scientific analysis, and test and analysis. He has worked across and with dozens of organizations, agencies, services and partner nations. He has been recognized by selections to ARPC's Key Personnel List/High Potential Officer by MAF, CAF and the AFSC 61/62/63 teams. Colonel Mikkelson is a command pilot with more than 3,000 hours primarily in the C-5, T-1, T-37 and T-38.

Abstract

As seen in Iraq and Afghanistan, our adversaries are quickly gaining access to global technologies and acquiring means to develop threats and countermeasures to our systems.¹ In the first few years of those conflicts, the US was ineffective in rapidly reacting and adjusting to deal with the changing tactics and techniques of our enemies. However, since US government changes were made in 2005 to impact our ability to rapidly adapt and field new technologies, some organizations have adapted better than others.

This paper argues SOCOM's Special Operations Research, Development and Acquisition Center (SORDAC) is the Department of Defense (DoD) leader in rapid acquisitions, and its culture and practices should be benchmarked by the other services. This paper examines SORDAC's unique acquisition environment, its unique culture and how SORDAC employs and synergizes innovative acquisition tools, and finally areas for improvement within the acquisition world. SORDAC's partnerships with innovative commercial technology vendors minimizes costs and risks to the government, has spun off applicable and relevant technologies, and has been critical in enhancing the most capable and feared fighting force in the world.

The asymmetric capabilities proliferating throughout an increasingly connected global world require SOF to leverage game changing technologies such as cyber, robotics, nanotechnology, and ISR to ensure our comparative advantage and ability to achieve success despite rapidly evolving future challenges.²

Admiral William McRaven
Commander, USSOCOM
“SOCOM 2020”

Introduction

The Department of Defense (DoD), like every other governmental organization, is under intense scrutiny to justify the budgetary dollars they receive. The DoD’s purpose, in simplest terms, is to deter wars, but if necessary, win them, and win them decisively per US doctrine. Unfortunately the proliferation of cheap and disruptive technologies assist or enable our enemies whether from a military force such as Russia or China, or a violent extremist organization (VEO), like ISIS. All of whom have been able to adapt and quickly leverage technology to exploit selected battlespaces.

As the provider of multiple asymmetric capabilities, Special Operations Command (SOCOM) provides fully capable and enabled Special Operations Forces (SOF) to defend our interests across the globe, particularly in irregular warfare in support of the DoD mission. In support of these efforts, the Special Operations Research, Development and Acquisition Center (SORDAC) provides “rapid and focused acquisition, technology, and logistics support to SOF warfighters”.³ SORDAC recognizes innovation as an absolutely critical element in today’s asymmetric warfare, and accordingly. Most often, SORDAC supports the warfighter’s urgent requirements by modifying commercial or military ‘off the shelf’ (COTS or MOTS) technology. However, when there is no existing solution the SORDAC Science and Technology (S&T) directorate finds solutions to warrior-identified critical gaps.

The ability to win in combat is becoming ever-increasingly dependent on technological and informational advantages, rather than size or makeup of military forces. The United State's dependency on maintaining a technological 'offset' necessitates constant innovation. This is echoed by former Chairman, Joint Chiefs of Staff (CJCS), Gen Martin Dempsey who believes to live within the means of the Budget Control Act, the "United States needs to lower the cost of its defense, in manpower and excess infrastructure, *and to innovate* for greater agility in forward-deploying forces, to provide 'dynamic presence' where it is most needed overseas."⁴

Thesis

This paper argues that SORDAC's unique environment, culture and innovative acquisition practices are a model to field solutions in minimal time. SORDAC's partnerships with innovative commercial technology vendors minimizes costs and risks to the government, enables spin-off technologies, and have proven to be critical to the most capable and feared fighting force in the world. SORDAC's culture and practices should be benchmarked by all other services.

This essay first examines SORDAC's acquisition environment and assesses SORDAC's unique culture. This examination provides a foundation to better understand the synergistic effect created within this rapid acquisition system. The analysis then examines how SORDAC employs innovative acquisition tools to capitalize on existing technologies and minimize government cost and risk. Finally, the paper identifies relevant areas for improvement within the acquisition world, and offers areas for further research.

I. SORDAC's Operational Environment

SORDAC's operational environment is unique when compared with the typical DoD organization. First, it is important to understand the challenges within DoD's acquisition

environment. What follows is a brief description of the DoD's acquisition inadequacies and bureaucracy, to include deliberate (or conventional) versus rapid acquisitions, Acquisition Category (ACAT) levels, and SOCOM's unique acquisition authorities.

The Federal Acquisition Regulation (FAR) states all defense acquisition programs are designated by an Acquisition Category, or ACAT (i.e., ACAT I through III) and type. ACAT I are Major Weapon Systems (MWS) typically involving hundreds of millions of dollars and requiring the most oversight, whereas ACAT III are for the smallest programs and require the least amount of oversight and lowest decision authority. With few exceptions, SOCOM does not field ACAT I or II programs – only ACAT III and below.⁵ For larger programs, SORDAC work alongside the services to field equipment such as fixed-wing aircraft and helicopters. While this is a huge advantage for SOCOM, the other services do have ACAT III and rapid acquisition programs that are worthy of comparison.

DoD acquisition notorious inefficiencies at fielding programs late, over budget, and lacking required capabilities deal mainly with larger, multi-million dollar systems. Numerous efforts have been made throughout the years to reform the system. There were nine efforts between 1985 and 2001, and 128 studies about acquisition reform.⁶ A 2007 Defense Science Board (DSB) study that analyzed over a decade of data and reported the average developmental cycle in the services' largest programs was 11.5 years, compared to the commercial markets' cycle of 3-4 years.⁷ In spite of this stark contrast, prior to 9/11 the Federal Acquisition Regulations (FAR), DoD Directive 5000.1, DoD Instruction 5000.2, and the Defense Acquisition Guidebook concentrated on the traditional, 'deliberate' acquisition process and did not address the rapid process required for urgent operational needs. However, due to the asymmetric warfare

in Afghanistan, it was quickly highlighted that DoD rapid acquisitions also needed reform, and since 2002 many policies were passed to that end.

Urgent operational needs have always been present. Historical examples of ingenuity and rapid acquisition exist back to World War II. However, leaders back then were not encumbered by today's current regulations and processes. Over the decades, many argue acquisition oversight and accountability requirements developed into a bureaucracy that grew too large and eventually got in the way of fielding systems in a timely and cost-effective manner. The wars in Afghanistan and Iraq reinvigorated the argument for more agile acquisitions. Thus, the FY02 Defense Planning Guidance (DPG) mandated each service develop rapid acquisition programs to meet the increasing demands arriving from the battlefield. The goal was to meet urgent wartime needs in months instead of years. Subsequently in 2004, the Joint Rapid Acquisition Cell (JRAC) was created and shortly thereafter, the Joint Staff issued Chairman, Joint Chiefs of Staff Instruction (CJCSI) 3470.01, "Rapid Resourcing of Joint Urgent Operational Needs (JUONs)," to facilitate the processing of urgent needs. As part of the FY05 Ronald Reagan National Defense Authorization Act, the Rapid Acquisition Act (RAA), sect 811, gives the SecDef the authority to reallocate up to \$100M to meet urgent capability shortages that have resulted in wartime casualties. The RAA also gave the SecDef the ability to rapidly procure needed equipment and capabilities by using money not specifically designated for procurement, operations and maintenance, research, development, or test and evaluation. This bypassed regulatory requirements except those that would incur criminal punishment, thus providing another avenue to rapidly respond to urgent needs. As a result of uncoordinated efforts chasing new funding, there were approximately twenty ad hoc rapid acquisition

organizations as of 2009, but no evidence is found to illustrate any collaboration in their methods or lessons learned.⁸ In spite of the new directives, little progress has been realized.

Another significant advantage SOCOM acquisition has is codified in Title 10, Section 167, “the commander of the special operations command shall be responsible for, and shall have the authority to conduct, the development and acquisition of special operations-peculiar equipment; and (ii) acquisitions of special operations-peculiar material, supplies, and services.” Congress also designated Major Force Program-11 (MFP-11) funding to support the development, acquisition, and sustainment activities for special operations peculiar equipment. Congress also created an Assistant Secretary of Defense for Special Operations and Low Intensity Conflict (ASD-SO/LIC) to provide oversight and advocacy for SOCOM. The result is SOCOM controls its own acquisition budget and does not have to compete within the other services.

In SOCOM’s unique acquisition environment, the Program Executive Offices (PEOs), Program Managers (PMs) and contracting officers are co-located; they can simply walk down the hall and debate or investigate issues. Service acquisitions offices are typically in different buildings or often, on different bases. Calling, faxing, emailing, or video teleconferencing are arguably much less efficient, less effective, and less conducive to team building and partnering than simply walking down the hall. Indeed, SOCOM’s unique authorities and seamless acquisition chain allow them more acquisition agility.

For the purposes of this paper, only rapid acquisition will be discussed since deliberate acquisition cannot meet urgent requirements. Also, in rapid acquisition realize there is a difference between capability shortfalls of existing technology (or ‘evolutionary’ technology)

and those where technology does not exist ('revolutionary' technology, addressed by SORDAC S&T).

II. SORDAC's Unique Culture

SORDAC has the fewest restraints and constraints of any Combatant Command or DoD component acquisition program and has leveraged its unique mission set, acquisition project size, and innovative culture into being the gold standard of rapid acquisition. A brief assessment of SORDAC's unique culture is warranted and how the culture provides synergistic effects when combined with its preferable acquisition environment.

SORDAC identifies with a 'no-fail mission' that provides effective, wide-ranging, time-sensitive capabilities to widely dispersed and often isolated special operations forces. This mission drives and dictates a different mentality as unconventional needs demand unconventional approaches. In today's reality, SOCOM, industry, academia, labs and services must leverage each other vice competing.⁹ Strategically, SORDAC recognizes that educating and motivating its people is the key to enduring innovation and improvement. To that end, SORDAC authored and advertises their own 'Acquisition Principles,' 'Blueprint,' and 'SOF Acquisition Truths' which reinforce their organizational mindset and culture.

SORDAC's principles are to, "deliver capability to the user expeditiously; exploit proven techniques and methods; keep warfighters involved throughout the process; and take risk and manage it!"¹⁰ These principles keep SORDAC focused on the end user and avoid getting bogged down by bureaucracy. SORDAC's blueprint is; "set unreasonable expectations; execute an elastic business definition; a cause not a business; embrace and listen to new voices; enable a market for innovation; exploit low-risk experimentation; create cellular division; and connectivity."¹¹ This blueprint aims high, encouraging innovation and failing fast, which saves time and money by quickly finding out if something is not viable. Finally, SORDAC's 'SOF

Acquisition Truths' are; "Fast does not equal undisciplined; More bureaucracy does not ensure a better product; Risk must be managed not avoided; Faster does not have to increase cost/risk; Competition can be done quickly; Unconventional thinking is an enabler; and Credibility & transparency enable freedom of action"¹² The 'Truths' concept comes from SOCOM's 'SOF Truths' and encapsulates what makes SORDAC's culture special within SOCOM. These are in contrast to the prevailing big acquisition approach to those concepts. SORDAC believes, "culture vs. process is the largest enabler for rapid acquisition"¹³ and can overcome these barriers and do things better. In five interviews with recent or current SORDAC personnel, all cited the difference in SORDAC's culture from previous acquisition experiences in many areas, specifically the leadership support, the mentality of 'failing forward' and 'failing fast', user involvement at all levels of process, delegating decisions to the lowest level, and short chains of command as keys to SORDAC's results. SORDAC's Acquisition Executive, James 'Hondo' Geurts, describes their success as, "SOF acquisitions are accomplished in 1/10th the time, 1/10th the cost, 1/20th the people,"¹⁴

Individually, the acquisition professionals interviewed reported SORDAC was successful in their measure of success -- getting the warfighter what they needed quickly and being trusted by the user to do so. Furthermore, according to a 2009 Defense Science Board (DSB) Rapid Acquisition study, compared with the JUONS, Navy, Air Force and Army rapid acquisition processes, the SOCOM process had the lowest time to initial operating capability (IOC) for the warfighter (296 days, 13% and 32% faster than next best) after normalizing the data.¹⁵

III. SORDAC Innovative Use of Acquisition Tools

SORDAC's culture produces favorable results, and their dedication to the warfighter is more than a cultural attitude. It also involves a deep understanding and comprehension of their legal environment to pursue innovative acquisition techniques. While remaining within all

Federal Acquisition Regulation (FAR)/DoD laws, they are using all tools available to get the warfighter what they need. This section presents a discussion of the pioneering SORDAC industry involvement, and is followed by a great example of SORDAC's innovative approach - the Tactical Assault Light Operator Suit (TALOS) project.

Simply put, the military cannot afford to waste time and resources on reinventing a technology that already exists. To this end, SORDAC has become a proficient 'technology prospector' by establishing essential interaction and relationships with commercial markets, academia and the DOD service labs. The examples below illustrate how SORDAC is more active and effective at maneuvering within their 'battlespace' in acquisition law than any other service.

Towards this collaborative effort, the Technology and Industry Liaison Office 2.0 (TILO) is the primary contact for SOCOM and industry, academia and other government agencies to facilitate communications, connections and collaboration of SOF capabilities, ideas and solutions to command interest areas. SOCOM advertises 'Capability Areas of Interest' on their webpage and industry responds by submitting a white paper. TILO subject matter experts (SMEs) make assessments of the white papers and determine if further investigation of the submitted concept is warranted. Shelvin Watts, the TILO office manager, reports the office receives approximately 700-800 capability submissions each year with about 25-30% resulting in further review.¹⁶ SORDAC has also partnered with the Doolittle Institute to run 'SofWerX,' a technology incubator in downtown Tampa. The Doolittle Institute is a Florida non-profit with a charter, "to create an innovative environment for bringing together the best minds of Industry, Academia, and Government to collaborate and find solutions to the toughest Science and Technology challenges while championing science, technology, engineering and mathematics education for

all levels of society.”¹⁷ SofWerX helps SOCOM find commercial vendors to fill SOCOM capability gaps using a different process from the TILO.¹⁸ Rather than requiring a white paper submittal, SofWerX has a downtown Tampa facility manned with field experienced warfighters where anyone can come in off the street with an idea or product and discuss it with field experts.¹⁹ This promotes industry engagement by conducting rapid innovation and design sessions with government, academia, industry and front line experts. SofWerX hosts technology ‘sprints’ and ‘hack-a-thons,’ where innovators from relevant fields are invited in with warfighters to rapidly overcome hard to solve problems. They also conduct rapid prototyping sessions to build out ideas and designs and better inform future builds and engineering decisions.²⁰ Similarly, Small Business Innovative Research (SBIR) efforts “stimulate technological innovation and increase private sector commercialization and small business participation in federally funded research and development.”²¹ This is part of the overall DoD SBIR program’s mission to “leverage small business technology innovation for the Warfighter... [and] ...is focused on providing funding for the development of advanced technology that provides increased capability for the SOF Warfighter.”²²

Much of the increased capability comes from the methods employed by SORDAC and are highlighted in the White House Office of Science and Technology Policy’s (OSTP) August 2014 report, “Innovative Contracting Case Studies.” This report describes a number of ways Federal agencies are getting more innovation per taxpayer dollar – all under existing laws and regulations. Prize Challenges are able to reach beyond the expected or typical vendor base to increase the number and diversity of minds working on the problem to bring unconventional perspectives. They also maximize return on taxpayer dollars and inspire risk-taking.²³ CRADA (Cooperative Research & Development Agreements) are legal agreements for RDT&E,

providing a collaborative effort with non-federal parties.²⁴ Non-federal parties may provide funds, whereas a federal party may not, but both may provide and share personnel, services, and resources. Since no federal funds are allocated, normal government procurement requirements do not apply.²⁵

Keeping with its principal of cultivating acquisition professionals, USSOCOM supports a unique opportunity, called the Ghost Program, for the best and brightest Air Force (AF) junior acquirers to apply rapid fielding techniques while furthering professional development through mentorship and first-hand experiences.²⁶ It allows them to experience the SOCOM rapid acquisition model, connect with operators, all the while forging tomorrow's leaders in a high-tempo, ops dedicated environment. Similarly, SORDAC supports the Revolutionary Acquisition Techniques Procedure and Collaboration program, (or RATPAC) which empowers the junior acquisition force to share tactics, techniques and procedures (TTPs) and drive innovation from bottom up.²⁷

SORDAC's continued innovative efforts have led to the deployment of SOF Advanced Manufacturing (3D printing). This concept "enables the global SOF Network with distributed use of networked advanced design and manufacturing tools...empowering units and individuals solving problems and implementing solutions at the point of need."²⁸ Further examples of SORDAC's increased partnering with commercial markets and industry include hosting or collaborating with multiple organizations such as: the SOF Industry Conference and SOF Warrior Industry, Special Operations Forces Warrior Industry Collaboration (SOFWIC) and industry visits with the Acquisition Executive. SORDAC also focuses on the user with Technical Experimentation, the Science & Technology (S&T) council, component exercises, unclassified test beds, and persistent feedback of requirements and what's being delivered.

These examples demonstrate that SORDAC embraces synergistic relationships that get the warfighter what they need while maximizing interaction with commercial markets. These relationships are key to enabling innovation.

A great example of how SORDAC currently uses its unique environment, innovative culture, and available tools to their advantage is the ‘Tactical Assault Light Operator Suit’ or TALOS. Frustrated by the casualties taken in the fatal funnel stage of a target building breach, USSOCOM Commander Admiral William McRaven announced at a May 2013 conference his vision for a modern suit of armor dubbed TALOS, or as it’s more commonly known, the ‘Iron Man suit.’²⁹ The laboratories, technology sector, universities, contractors and acquisition professionals were on notice he wanted a suit ready for full field testing within five years.³⁰ McRaven said "the suit, if done correctly, will yield a revolutionary improvement in survivability and capability for special operators [...] a huge comparative advantage over our enemies and give our warriors the protection they need. [...] We are already seeing astounding results of this collaboration."³¹ This collaboration includes 56 corporations, 16 government agencies, 13 universities and 10 national laboratories.³² SORDAC hosts *Monster Garage* type events, where they will invite mechanics and inventors to create components for the suit.³³ This interactive process continually compares viability with dynamic warfighter requirements. This innovative approach is designed to motivate teamwork that generates solutions to move forward. This culture of involving innovators from academia, labs, and the commercial market with warfighters in new ways is a great example of how SORDAC’s people lead the way in rapid acquisition.

Acquisition Executive James ‘Hondo’ Guerts told reporters after eighteen months it has produced "great spin-outs we didn't think were possible."³⁴ Guerts continued, "rapid prototyping was almost reverse education with industry..." he said, "Industry sends people there not because

they had a product to sell, but an expertise and they wanted to contribute. I think it's a great model."³⁵ No other service acquisition or rapid acquisition organization has matured their processes and relationships as SORDAC has.

IV. Areas for Improvement Within the Acquisition World

Based on research by academia and government, as well as interviews with acquisition professionals from both SORDAC and DoD, SORDAC rapid acquisition gets superior results and should be benchmarked by the rest of DoD. Within the services there are areas for improvement, such as acquisition law reform, better awareness of available or developing technology, and process improvement opportunities.

Acquisition Law Reform

The most obvious and widely discussed solution is acquisition reform. These efforts are supported by Congress, the defense industry, government and the military alike. Recent efforts are evidenced by H.R. 1597, the “Agile Acquisition to Retain Technological Edge Act” introduced 15 Mar 2015, and the government’s own GAO study.³⁶ Predictably, the National Defense Industrial Association (NDIA) lobbies and communicates with Congress as evidenced by their 9 Apr 2015 letter with respect to H.R. 1597 and further acquisition reform.³⁷ H.R. 1597 highlights include: DoD acquisitions should be “(1) successful, (2) proactive, (3) agile, (4) transparent, and (5) innovative.”³⁸ Authority would be “permanently extended for: (1) funding the DOD Acquisition Workforce Development Fund, and (2) expedited hiring for acquisition workforce positions.”³⁹ Also a dual-track career path would be “established that permits officers and enlisted personnel to gain experience in a primary career in combat arms and a secondary career in the acquisition field.”⁴⁰ H.R. 1597 is one of many vehicles attempting to reform the system. Regrettably, the immense forces working against reform not only include the legitimate need for oversight, but also the leviathan bureaucracy that resists change.

Technology Awareness

SOCOM and SORDAC are trying to determine the link between research, development, evaluation, acquisitions and future capability gaps. By definition, we cannot know our gaps if we don't know what technology exists now. Officially, SORDAC's TILO assists their Director in maintaining industry capability information, but in reality, they track only technologies that have flowed through their office.⁴¹ Moreover, the 2007 DSB study showed little evidence that lessons learned are shared from one rapid reaction project to another across the multiple ad hoc processes.⁴²

Despite the argument above for the need, currently there is no central technology repository or database of technology for any of the services to access when considering modifications or derived requirements. The Defense Technical Information Center (DTIC) provides a type of technology database; however, interviewees have said it is cumbersome, unintuitive, incomplete, and therefore not conducive to collaboration.⁴³ This would require a DoD acquisitions cultural change to emphasize the value of relationships with the DoD labs, academia and the commercial market. This research suggests developing a 'database of technology' would require technological SMEs (located in the suggested RFO) who would cultivate and massage a running dialogue with DoD labs, System Program Offices (SPOs), academia and the commercial market.

Specifically, a large master set of technology attributes with associated metrics would be developed. For a given technology, relevant attributes would be entered with metrics. There would be two databases, one for mature technology and one for technology in development. Completed, proven technologies would be in a 'Tech off Shelf (ToS)' database, whereas technologies in development would be in a 'Tech in Progress (TiP)' database, which would use

the same attributes and associated metrics. TiP technologies should also require times to field (TTF) attributes, one of 50% confidence and another of 90% confidence. In other words, TTF dates would be entered signifying when the SME feels a given technology could be fielded with 50% confidence, as well as for 90% confidence. If technologies are not entered in the database, it would be analogous to searching the internet for an item using only aafes.com versus google.com. In other words you can't find technologies that aren't entered in the system. As the databases become increasingly populated, the robustness, relevance, and usefulness would increase exponentially. This is why relationships with the labs, SPOs, academia and the market would be so important.

Assuming the relationships are in place and the technologies entered in the database with attributes and metrics, a requirement's attributes and metrics would be compared against the 'ToS' and 'TiP' databases to determine if the required technology exists, or if it is being incubated in the labs, SPOs, academia or commercial market. The report should also show items that are within a specified percentage of the key capabilities, to accommodate possible solutions by modification of existing technologies. This allows the decision maker to see what solutions exist, and what upgrade or new solutions may be in research and development. The Service Chief would have to weigh the cost of the existing solution (if one exists in ToS), against waiting on a possibly better TiP solution if its TTFs were acceptable. If one of these or a combination satisfies the decision maker, there will be no need for a new program. If there is none, the service should determine if this is a unique requirement for research and development. In an ideal world, then the tools of a centralized rapid acquisition program modeled after SOCOM could simultaneously come to bear on this requirement. How robust the 'ToS + TiP' approach will be depends on the standardization and definition of technology inputs and the size and

strength of the relationships with DoD labs, SPOs, academia, and the commercial market. Further obstacles may be classification issues for non-DoD organizations, operations security of our intentions or capabilities, and uniformity and/or normalization of attributes. This approach would also solve the issue of numerous offices/agencies/labs that are not sharing info (whether due to proprietary reasons, classification, or political barriers). Plus, it would also allow economies of scale and reduction in duplication of effort.

Process Improvements

There are numerous process improvements for SOCOM and DoD. Specifically SOCOM could insert Pentagon liaisons to be within the services' programming processes to leverage more of their funding and technology. The other services would be best served in having keen awareness of Better Business Practices (BBP) 3.0, and study of SORDAC's culture and best practices at a minimum.⁴⁴ SORDAC's culture and mentality permeated throughout all services regardless of ACAT level would provide benefits even to 'big' acquisitions. A possible recommendation would be trying a few ACAT III programs per service as a pilot to show effectiveness and work out the feasibility, and ideally would reduce resistance from the services.

This research concurs with the DSB report's recommendation for the initiation of a 'Rapid Fielding Organization' (RFO), to maintain focus towards consolidating urgent needs and rapid reaction programs (based on SORDAC's model). This would also help identify gaps/overlaps to better focus resources of the acquisition and technical communities.

Discussions with former HAF programmers and project managers uncovered an area where SOCOM could do a better job of integrating with the other services, inject SOF's priorities into discussions and advocate for possible synergies. More SOF interaction at the conventional service Program Element Monitor "(PEM) parades" would give SOCOM

awareness of the technologies pursued by the services and if they may be able to synergize it in SOCOM's mission. These "parades" are annual Pentagon major reviews to their programming panel chairs. The same concept applies to embedding SOF liaisons in the service programming Headquarters, as well as in the service Requirement Oversight Councils (ROCs), rather than only in the follow-on Joint Requirement Oversight Council (JROC). These are opportunities to engage outside the corporate process and plant the seeds of SOF priorities/requirements while services are building their Program Objective Memorandums (POMs). SOCOM's mission and requirements are typically well received by other servicemembers when engaged. Rather than only benefitting from these 'opportunistic liaisons' SOCOM could take advantage if dedicated manpower were put in this process (functional, HAF, OSD) as well. This would allow message shaping and socialization of the concepts to increase the chance of surviving initial contact in the Program Objective Memorandum (POM) and JROC processes.

Broad Agency Announcements (BAA) are an underutilized tool to inform the commercial market and academia of specific technical requirements SOCOM desires and allows them to submit white papers for consideration. This BAA process significantly increases competition and motivation, especially when combined with prize-based challenges. This also adheres to SOCOM's strategy of low risk commitments, or as Geurts describes, making lots of small bets, to be able to double down into promising technologies.⁴⁵

SORDAC's way of business isn't universally acclaimed. Every defense acquisition program, no matter how big or small, has a political component that must be addressed. For example, in October 2014 the final "wastebook" from Sen. Tom Coburn, R-Okla., listed the Tactical Assault Light Operator Suit (TALOS) program among 100 federal projects he called wasteful.⁴⁶ The report knocked TALOS' estimated \$80 million budget as a fraction of the

projected cost to produce a prototype. Articles questioning the money being spent on the program can be found, but this is a S&T project pushing limits of current technology. While criticism on the lack of metrics and transparency may be valid, in general, measures of effectiveness are difficult to validate in S&T by its very nature. However, SORDAC's Acquisition Executive Hondo Geurts noted the S&T risk is accepted or declined by the commander, nonetheless there is also no way to accurately measure the spin-off technologies, lessons learned, and second order effects.⁴⁷ Due to this ambiguity, defending a program becomes a sell on intangibles rather than hard metrics. SOCOM must strive to develop a concentrated and continued strategic communication and public relations campaign, as well as collaborating efforts and sharing with other DoD labs on how to best show value to Congress to ensure funding into the future. Further research into effective and understandable measures of performance and effectiveness are paramount to these efforts.

V. CONCLUSION

The DoD Acquisition process and its by-products have been parodied as overcost, overschedule and underperforming. Since 2002, the government has passed laws and regulations to improve our rapid acquisition forces. Each service has made progress in creating rapid acquisitions, but according to the 2009 DSB report and acquisition professionals interviewed, SORDAC is the DoD leader in rapid acquisitions. Its innovative culture and practices bring out the best in its people and should be benchmarked by the other services. This paper presented a discussion of the SORDAC's operational environment, cultural innovation, and tools and projects. Limitations, pitfalls, and mitigation options were also discussed. There is no doubt this paradigm shift would require a tremendous effort. It would require academia, commercial markets, labs, services, acquisition workforce, and services to collaborate openly - possibly even give up responsibilities or authorities in the interest of streamlining the overall

process. Quite possibly the most difficult would be limiting the congressional propensity to use acquisition dollars for their political purposes rather than capability and cost considerations.

Current Secretary of Defense Ash Carter has the background, expertise, and goodwill to provide the cabinet level leadership this transformation would require. Optimizing this process may be impossible, but improving it is well within reach.

Based on this analysis, if there are still other ways to rapidly acquire evolutionary or revolutionary technologies within the law, SORDAC's people and culture are best suited to find them. SORDAC has proven to be a force multiplier; it has developed new systems and technologies which can then be adopted by the services for procurement savings. It must continue to think outside the box and its culture of innovation and push for a national clearing house or database of technologies to minimize cycle time. This would be a DoD-wide benefit and provide a solution to well known shortfall.

Former SOCOM Commander Admiral McRaven said SOCOM's ability to maintain a competitive advantage "depends on our ability to out-think and out-pace the enemy in speed, technology, equipment, and maneuverability. SOF capabilities are directly related to investments we make through our procurement budget."⁴⁸ SORDAC's Blueprint, Acquisition Truths and culture are proven within ACAT III, and are transferrable to the other services and in other ACATs. This paper argues SOCOM's rapid acquisition is meeting that challenge by not only getting the warfighter what they need and when they need it, while being trusted to do so. Benchmarking SOCOM's processes and culture will benefit meeting all warfighters' needs and posture DoD's acquisitions to more rapidly react to future threats.

Notes

¹ Defense Science Board (DSB) Task Force, “Fulfillment of Urgent Operational Needs” (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, July 2009), iii

² Admiral William McRaven, Commander, USSOCOM, “SOCOM 2020: Forging the Tip of the Spear,” [2014], 3.

³ James Cluck, “USSOCOM Acquisition,” [2010], 4.

⁴ “Dempsey Calls for Innovation in Defense,” Atlantic Council, May 14, 2014, <http://www.atlanticcouncil.org/events/past-events/dempsey-calls-for-innovation-in-defense>.

⁵ Jan Kinner, DAU, to the author, email, 5 October 2015.

⁶ Gary Christle, “How Do We Avoid Being the 129th Study?” (PowerPoint, Washington, DC, August 2005).

⁷ Defense Science Board (DSB), “2006 Summer Study on 21st Century Strategic Technology Vectors. (Vol I - IV),” (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, February 2007). <http://www.acq.osd.mil/dsb/reports.htm>.

⁸ Sandra I. Erwin, “Lawmakers Question Defense Strategy for ‘Rapid’ Acquisitions,” *National Defense*, November 2009, <http://www.nationaldefensemagazine.org/archive/2009/November/Pages/LawmakersQuestionDefenseStrategyfor%E2%80%98Rapid%E2%80%99Acquisitions.aspx>.

⁹ James “Hondo” Geurts, “Acquisition at the Tip of the Spear,” (powerpoint presentation, 2011), 7.

¹⁰ James “Hondo” Geurts, “Special Operations Research, Development, & Acquisition Center (SORDAC) AFCEA Brief,” (powerpoint presentation, 2014), 9.

¹¹ Ibid, 10.

¹² Ibid, 22.

¹³ James “Hondo” Geurts, “Acquisition at the Tip of the Spear”, 7.

¹⁴ James “Hondo” Geurts, “Special Operations Research, Development, & Acquisition Center (SORDAC) AFCEA Brief”, 18.

¹⁵ Defense Science Board (DSB) Task Force, “Fulfillment of Urgent Operational Needs,” 22.

¹⁶ Shelvin Watts, Program Support Specialist, Technology & Industry Liaison Office (TILO), to the author, email, 3 November 2015.

¹⁷ “Doolittle Institute,” accessed 3 March 2016, <http://doolittleinstitute.org/>.

¹⁸ “SofWerX,” accessed 28 February 2016, www.sofwerx.org. (website currently down)

¹⁹ James “Hondo” Geurts, “SOCOM Acquisition” (lecture, Air War College, Maxwell AFB, AL, 24 February, 2016).

-
- ²⁰ Karl Rozelsky, "SOF Warrior: SOFWIC '15," (powerpoint presentation, 2015), 18.
- ²¹ USSOCOM, "USSOCOM Small Business Innovative Research (SBIR) Website," accessed 3 February 2016, www.ussocomsbir.com.
- ²² Ibid.
- ²³ White House Office of Science and Technology Policy (OSTP), "Innovative Contracting Case Studies" August 2014, 12.
- ²⁴ Tony Davis, Director, "SOF Warrior Industry Collaboration," (powerpoint presentation, 2015), 20.
- ²⁵ Ibid, 20.
- ²⁶ Yasmin Tadjdeh, "Special Operations Command Bypasses Acquisition Red Tape (UPDATED)," *National Defense*, (January 2015).
- ²⁷ James "Hondo" Geurts, "The Only Easy Day Was Yesterday... SOF AT&L," (powerpoint presentation, 2014), 18.
- ²⁸ James "Hondo" Geurts, "Special Operations Research, Development, & Acquisition Center (SORDAC) AFCEA Brief," (powerpoint presentation, 2014), 30.
- ²⁹ CAPT Kevin Aandahl, USN, USSOCOM, "Special Operations Command," *United States Army Garrison White Sands Missile Range*, May 8, 2014, <http://www.wsmr.army.mil/gar/ata/pages/specialoperationscommand.aspx>.
- ³⁰ Andrew White, "Future Special Operations Protection Systems: A Look at USSOCOM's Tactical Assault Light Operator Suit (TALOS) Programme," *Military Times*, December 2014, 70.
- ³¹ Jesus Diaz, "Obama Says US Army Is Building a Real Iron Man and No, He Is Not Joking," 27 February 2014, <http://sploid.gizmodo.com/obama-says-us-army-is-building-real-iron-man-and-no-he-1532582334>.
- ³² CAPT Kevin Aandahl, USN, USSOCOM, "Special Operations Command."
- ³³ Jesus Diaz, "Obama Says US Army Is Building a Real Iron Man and No, He Is Not Joking," 27 February 2014, <http://sploid.gizmodo.com/obama-says-us-army-is-building-real-iron-man-and-no-he-1532582334>.
- ³⁴ Joe Gould, "Special Operators Discuss Technology, Intel and Cutting-Edge Gear at SO/LIC," *Defense News*, 2 February 2015.
- ³⁵ Ibid.
- ³⁶ Arnold Punaro, Chairman of the Board and Jon Etherton, Senior Fellow, National Defense Industrial Association, letter, 9 April 2015 to Honorables William Thornberry and Adam Smith.
- ³⁷ Ibid.
- ³⁸ "Agile Acquisition to Retain Technological Edge Act (H.R. 1597)," *GovTrack.us*, accessed 28 February 2016, <https://www.govtrack.us/congress/bills/114/hr1597>.
- ³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Shelvin Watts (Program Support Specialist, Technology & Industry Liaison Office (TILO)), in discussion with the author, 3 November 2015.

⁴² Defense Science Board (DSB), "Summer Study on 21st Century Strategic Technology Vectors. (Vol I - IV), (USD/AT&L)."

⁴³ COL Christopher Ford (US Army Acquisitions) in discussion with author 28 March 2016.

⁴⁴ Defense Acquisition University, "Better Buying Power," accessed 28 February 2016, <http://bbp.dau.mil/>.

⁴⁵ James "Hondo" Geurts, "SOCOM Acquisition" (lecture, Air War College, Maxwell AFB, AL, 24 February, 2016).

⁴⁶ Joe Gould, "Special Operators Discuss Technology, Intel and Cutting-Edge Gear at SO/LIC."

⁴⁷ Admiral William McRaven, "SOCOM 2020: Forging the Tip of the Spear", 3

⁴⁸ Ibid., 8.



Bibliography

- Aandahl, CAPT Kevin. "Special Operations Command." *United States Army Garrison White Sands Missile Range*, (8 May 2014).
<http://www.wsmr.army.mil/gar/ata/pages/specialoperationscommand.aspx>.
- "Agile Acquisition to Retain Technological Edge Act (H.R. 1597)." *GovTrack.us*. Accessed 28 February 2016. <https://www.govtrack.us/congress/bills/114/hr1597>.
- Christle, Gary. "How Do We Avoid Being the 129th Study?" PowerPoint presentation. Washington, DC, August 2005.
- Cluck, James. "USSOCOM Acquisition." PowerPoint presentation. [2010].
- Davis, Tony. "SOF Warrior Industry Collaboration." PowerPoint presentation. 2015.
- Defense Acquisition University. "Better Buying Power," Accessed 28 February 2015.
<http://bbp.dau.mil/>.
- "Dempsey Calls for Innovation in Defense." *Atlantic Council*, May 14, 2014.
<http://www.atlanticcouncil.org/events/past-events/dempsey-calls-for-innovation-in-defense>.
- Diaz, Jesus. "Obama Says US Army Is Building a Real Iron Man and No, He Is Not Joking," February 27, 2014. <http://sploid.gizmodo.com/obama-says-us-army-is-building-real-iron-man-and-no-he-1532582334>.
- "Doolittle Institute." Accessed 31 March 2016. <http://doolittleinstitute.org/>.
- Erwin, Sandra I. "Lawmakers Question Defense Strategy for 'Rapid' Acquisitions," *National Defense* (November 2009).
- Fulfillment of Urgent Operational Needs*. Defense Science Board (DSB) Task Force, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, March 2009.
- Geurts, James "Hondo". "Acquisition at the Tip of the Spear." PowerPoint presentation. 2011.
- . "SOCOM Acquisition." Lecture. Air War College, Maxwell AFB, AL, 24 February 2016.
- . "Special Operations Research, Development, & Acquisition Center (SORDAC) AFCEA Brief." PowerPoint presentation. 2014.

-
- . “The Only Easy Day Was Yesterday... SOF AT&L.” PowerPoint presentation. 2014.
- Gould, Joe. “Special Operators Discuss Technology, Intel and Cutting-Edge Gear at SO/LIC.” *Defense News*, (2 February 2015).
- Innovative Contracting Case Studies*. White House Office of Science and Technology Policy (OSTP), August 2014.
- Kinner, Jan. DAU. To the author. E-mail, 05 October 2015.
- McRaven, Admiral William. *SOCOM 2020: Forging the Tip of the Spear*, [2014].
- Punaro, Arnold, Chairman and Jon Etherton, Senior Fellow. “National Defense Industrial Association to Honorables William Thornberry and Adam Smith,” Letter. 9 April 2015.
- Rozelsky, Karl. “SOF Warrior: SOFWIC ’15.” PowerPoint presentation. [2015]
- “SofWerX,” Accessed 28 February 2016. www.sofwerx.org.
- Tadjdeh, Yasmin. “Special Operations Command Bypasses Acquisition Red Tape (UPDATED).” *National Defense*, (January 2015).
- USSOCOM SBIR. “USSOCOM Small Business Innovative Research (SBIR) Website,” Accessed 3 February 2016. www.ussocomsbir.com.
- Watts, Shelvin. Program Support Specialist, Technology & Industry Liaison Office (TILO). To the author. E-mail, 03 November 2015.
- White, Andrew. “Future Special Operations Protection Systems: A Look at USSOCOM’s Tactical Assault Light Operator Suit (TALOS) Programme.” *Military Times*, (December 2014): 70–73.
- 2006 Summer Study on 21st Century Strategic Technology Vectors*. (Vol I - IV), (USD/AT&L). Defense Science Board (DSB), February 2007. <http://www.acq.osd.mil/dsb/reports.htm>.